WHAT IS CLAIMED IS :

5   1. A method for transferring connectionless-oriented data packets between systems connected to each other through shared media, the method comprising the steps of:

   i) periodically transferring from a transmitting side of data packets an SR (Sender Report) packet, which includes information representing transmission data

10 packets;

   ii) determining if the data packets are lost based on the information of the SR packet if a receiving side of the data packets receives the SR packet from the transmitting side of the data packets, and transferring to the transmitting side of the data packets an RR (Receiver Report) packet, which includes information about a received data packet;

15   iii) periodically transferring an NACK (Negative Acknowledgement) packet, which includes information relating to the received data packet, if lost packets exist after the receiving side of the data packets periodically polls a receiver window; and

   iv) transferring to the receiving side of the data packets an NACKR (Negative Acknowledgement Reply) packet, which includes the lost data packets based on

20 information of the NACK packet, if the transmitting side of the data packets receives the NACK packet from the receiving side of the data packets.

   2. The method as claimed in claim 1, wherein the SR packet includes information of a next sequence number and a number of transferred packets.

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   3. The method as claimed in claim 1, wherein the RR packet includes information relating to a next sequence number, an ACK sequence number, a lowest sequence number of the receiver window which is not received, and a bitmap of received packets.

4. The method as claimed in claim 1, wherein the NACK packet includes information such as a lowest sequence number of the lost packets and a bitmask of a next

5 lost packet.

5. The method as claimed in claim 1, wherein the NACKR packet includes a lowest sequence number of one of the retransmitted packets and a bitmask of a next retransmission packet.

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6. An apparatus for transferring connectionless-oriented data packets between systems connected to each other through shared media, the apparatus comprising:

a control unit which manages transmitting states of clients depending on an activating state of the clients and transfers data to corresponding clients when fault of the

15 data occurs;

a transmitting/receiving unit which is connected to the control unit and performs data communication between related clients;

an identification unit which detects the transmitting states of the clients and an identification of the clients based on the data communicated in the transmitting/receiving

20 unit; and

a memory for storing client identification information depending on the activating state of the clients and initial sequence numbers related to data transmission with respect to each client.

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7. The apparatus as claimed in claim 6, wherein the control unit transfers an SR (Sender Report) packet, which includes information of a sequence number of a next packet to be transmitted and a number of already transferred packets, when data packets are transmitted and received.

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8. The apparatus as claimed in claim 6, wherein the control unit transfers an RR (Receiver Report) packet, which includes information regarding a next sequence number to be received by a transmitting side of the data packets, an ACK sequence number, a lowest sequence number of a receiver window which is not received, and a bitmap of

10   received packets, when receiving the data packets.

9. The apparatus as claimed in claim 6, wherein the control unit periodically polls the receiver window and periodically transfers to the transmitting side of the data packets an NACK (Negative Acknowledgement) packet, which includes information about

15   received data packets, if the lost data packets exist.

10. The apparatus as claimed in claim 9, wherein the NACK packet includes a lowest sequence number of one of the lost packets and a bitmask of a next lost packet.

20   11. The apparatus as claimed in claim 9, wherein a transmission apparatus of data packets, which receives the NACK packet from a receiving side of the data packets, transfers to the receiving side of the data packets an NACKR packet, which includes the lost data packet depending on information of the NACK packet.

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12. The apparatus as claimed in claim 11, wherein the NACKR packet includes a lowest sequence number of one of retransmitted packets and a bitmask of a next retransmission packet.

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